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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,115	07/10/2003	Han-Lim Lee	5000-1-381	2604
33942	7590	10/29/2004	EXAMINER	
CHA & REITER, LLC 210 ROUTE 4 EAST STE 103 PARAMUS, NJ 07652			SONG, SARAH U	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/617,115

Applicant(s)

LEE ET AL.

Examiner

Sarah Song

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. This application has been filed with seven (7) sheets of drawings, which have been approved by the Examiner.

Specification

3. The disclosure is objected to because of the following informalities: in line 13 of page 3, Examiner suggests deletion of "incurs".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

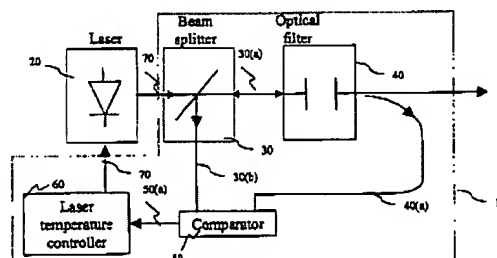
5. **Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peral et al. (U.S. Patent Application Publication 2002/0076132) in view of Onaka et al. (U.S. Patent 5,696,859).**
6. Regarding claim 1, Peral et al. discloses an optical transmitter for converting signals into optical signals and transmitting the optical signals using optical fibers, the optical transmitter comprising:

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- an electric signal generator 50 to convert a received signal into an electric signal;
- a distributed feedback laser diode 20 to convert an electric signal into an optical signal;
- and an optical filter 40 configured to filter the optical signal using a central wavelength, perform a vestigial side band modulation of the optical signal by degenerating a determined band of the optical signal using central wavelength, and reduce the band width of the optical fibers.

See Paragraphs [0021] and [0023].

7. Peral et al. discloses that the optical filter 40 may be an etalon or a fiber Bragg grating, but does not expressly disclose the optical filter to be an optical tunable filter. However optical tunable filters are well known in the art. In fact, fiber Bragg grating characteristics are well known in the art to fluctuate with ambient temperatures.



8. Onaka et al. discloses an optical tunable filter 18 for maintaining the desired filtering characteristics (see column 6, lines 28-31).

9. Peral et al. and Onaka et al. are analogous art as pertaining to LD transmitters.

10. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an optical tunable filter as disclosed by Onaka et al. in the device of Peral et al.

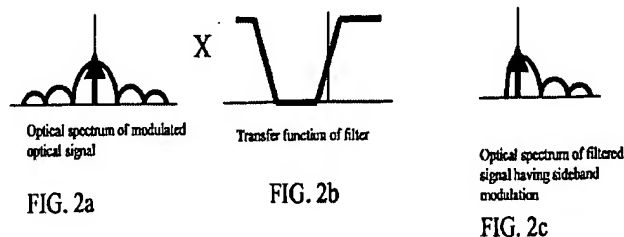
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11. One of ordinary skill in the art would have been motivated to provide a tunable filter in order to ensure operational stability of the optical filter 40 and preserve the optimum characteristics of the filter.

12. Regarding claim 2, the vestigial side band modulated optical signal is transmitted using the optical fibers. See Paragraph [0005].

13. Regarding claim 3, the optical tunable filter is further configured to enable setting the central wavelength. See Paragraph [0027] (“center wavelength of a particular filter may be optimized...”) and [0031] (“fiber Bragg grating may then be designed in accordance with initial design parameters...”).

14. Regarding claim 4, the central wavelength is set such that the power of the optical signals which have passed through the optical tunable filter is reduced at the side band. See Figures 2a, 2b and 2c.



15. Regarding claims 5-7, Peral et al. discloses the optical transmitter, wherein when the optical tunable filter sets the central wavelength to a peak portion of the optical signals, the power of a first logical level of the optical signals which have passed through the optical tunable filter is not reduced, but the power of a second logical level thereof is reduced. The first logical level is a logical one level of the optical signals; the second logical level is a logical zero level of the optical signals. See figures 2a, 2b and 2c.

16. Regarding claim 8, Peral et al. does not expressly disclose optical transmitter wherein the central wavelength set by the optical tunable filter is substantially larger than the central

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wavelength of the optical signals by 0.1 nm. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to set the central wavelength of the filter such that it is substantially larger than the central wavelength of the optical signals by 0.1 nm, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. See MPEP 2144.05(II)(B).

Conclusion


17. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Song whose telephone number is 571-272-2359. The examiner can normally be reached on M-Th 7:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sarah Song
Patent Examiner
Group Art Unit 2874